

REMARKS

Claims 1-8, 10-11, and 13-33 are pending. Claims 14 and 16-31 have been withdrawn from consideration. Claims 9 and 12 are cancelled. Claims 1, 5-8, 10, 13, and 15 are currently amended. Support for the amendments to claims 1 and 15 can be found, for example, in claims 1 and 15 and on page 6, lines 19-21 in the application as originally filed. Claims 5-6 are amended to correct antecedent basis. Claims 7 and 8 are amended to correct alleged indefiniteness. Support for the amendment to claim 10 can be found, for example, in claim 1 and page 8, lines 11-13 in Applicants' specification as originally filed. Claim 10 is also amended to correct claim dependency due to a cancelled claim. Claim 13 is amended to correct claim dependency and antecedent basis due to a cancelled claim. Support for the amendment to claim 13 can be found, for example, in claim 12 of the original application as filed. No new matter has been added to the specification. Reconsideration of the application and entry of the enclosed amendment are respectfully requested.

§ 112 Rejections

Claims 1-8, 10-11, 13 and 15 are rejected under 35 USC § 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which Applicants regard as the invention.

The Office Action states, "Claim 1 is incomplete for omitting essential structural cooperative relationships between elements, such omission amounting to a gap between the necessary structural connections. See MPEP §2172.01. Specifically, essential structural cooperative relationships between 'portion' and 'sites' are not clearly set forth and appear omitted." Applicants respectfully disagree. According to MPEP § 2172.01, "essential matter may include...necessary structural cooperative relationships of elements described by the applicant(s) as necessary to practice the invention." Applicants have previously amended claim 1 to recite "a surface that comprises a hydrophobic portion and capture sites," which describes the relationship of "hydrophobic portion" and "capture sites" as located on the surface of the solid phase material. Accordingly, Applicants respectfully submit that essential structural cooperative relationships between "portion" and "sites" are recited in claim 1 and request withdrawal of this rejection.

The Office Action states the phrase “the hydrophobic portion of the solid phase material” in claim 1 lacks antecedent basis. Applicants respectfully disagree. Both elements– i.e., the hydrophobic portion and the solid phase material– are expressly recited in the limitation to “providing a solid phase material comprising a surface that comprises a hydrophobic portion and capture sites” step of claim 1. The Applicants respectfully request withdrawal of this rejection.

The Office Action states that both instances of the phrase “the blocked solid phase material” in claim 1 lack antecedent basis. While not necessarily agreeing with the position stated in the Office Action, claim 1 has been amended to recite “contacting the solid phase material with the fluorinated nonionic surfactant to block at least a portion of the hydrophobic portion of the solid phase material thereby creating a blocked solid phase material.” This claim amendment provides antecedent basis for “the blocked solid phase material,” thereby rendering the rejection moot.

The Office Action states that the phrase “the adhered target molecules of the sample” in claim 1 is indefinite. While not necessarily agreeing with the position stated in the Office Action, claim 1 has been amended to recite “contacting the blocked solid phase material with the sample so that at least a portion of the target molecules adheres to the capture sites thereby creating adhered target molecules.” This claim amendment removed “of the sample” and provides antecedent basis for “adhered target molecules”, thereby rendering the rejection moot.

The Office Action states that the passive voice phrase “the hydrophobic portion is blocked” in claim 15 is indefinite. While not necessarily agreeing with the position stated in the Office Action, claim 15 has been amended to recite “to block at least a portion of the hydrophobic portion.” Applicants submit this claim amendment renders the indefiniteness rejection moot.

In summary, Applicants submit that claims 1-8, 10-11, 13, and 15 satisfy the requirements of 35 USC § 112, second paragraph, and respectfully request that the rejection be withdrawn and the claims allowed.

§ 102 Rejections

Claims 1, 2, 4, 10-11, 13, 15, 32, and 33 are rejected under 35 USC § 102(b) as being anticipated by Arentzen et al., U.S. Pat. No. US 5,491,083 (herein referred to as the ‘083 patent).

The Office Action states that the '083 patent provides, "a solid phase material comprising a surface that comprises a hydrophobic portion (see *e.g.*, col. 2, lines 24-28, 'fluorine resin membrane') and capture sites (see *e.g.*, col. 2, lines 24-28, 'hydrophilic on one side')" citing the Background Art section in the '083 patent. Applicants respectfully traverse the rejection.

Claims 1 and 15 have a substantially similar claim limitation to "providing a solid phase material comprising a surface that comprises a hydrophobic portion and capture sites, wherein the capture sites are either covalently attached or hydrophobically attached to the solid phase material" Applicants' response particularly addresses claim 1, however, because independent claim 15 has a substantially similar claim limitation, the argument below pertains to both independent claims.

The cited prior art fails to disclose or suggest, among other things, "providing a solid phase material comprising a surface that comprises a hydrophobic portion and capture sites, wherein the capture sites are either covalently attached or hydrophobically attached to the solid phase material . . ." as recited in Applicants' claim 1. The Office Action states the '083 patent discloses capture sites citing the "hydrophilic on one side" portion of an asymmetrically functional membrane disclosed in the Background Art section. However, the '083 patent does not teach or suggest that the "capture sites are either covalently attached or hydrophobically attached to the solid phase material" According to the disclosure in the '083 patent, in the asymmetrically functional membrane, the enzyme (*e.g.*, target molecule) "is cross-linked within **the pores** of the wetted membrane" and the "approach is limited to porous fluorocarbon membranes." See col. 2, lines 32-34, emphasis added. Thus, the '083 patent fails to teach or suggest all elements of amended claim 1 and the rejection should be withdrawn.

Based on the foregoing, Applicants respectfully submit that independent claims 1 and 15 are allowable over the cited art. Because claims 2, 4, 10-11, 13, 32, and 33 depend directly or indirectly from now allowable base claims 1 or 15, Applicants submit that these dependent claims are in condition for allowance.

Claims 14 and 16 have been amended to incorporate the features of allowable claim 1 in support of a rejoinder request submitted herewith. Claims 24-25, 27, 28, 30, and 31 have been amended to correct antecedent basis. Applicants have used the combination status identifier of

“Withdrawn-currently amended” as authorized under 37 CFR 1.121. *See e.g.*, 68 Fed. Reg. 38617, col. 3, first full paragraph.

Applicants respectfully request rejoinder and allowance of claims 14 and 16-31 because these claims require the features found allowable in claim 1. Where, as here, the claims directed to an election are allowable, nonelected inventions that depend from or otherwise require all the limitations of an allowable claim should be rejoined (MPEP § 821.04). Thus, Applicants respectfully submit that claims 14 and 16-31 should be rejoined and allowed.

In view of the foregoing, Applicants submit that the present application is in condition for allowance. Reconsideration and allowance of the pending claims at an early date is solicited. If issues remain, the Examiner is invited to contact the Applicants’ attorney at the telephone number provided below.

Respectfully submitted,

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Date

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